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Report on the work of the United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea at its nineteenth meeting

Letter dated 3 July 2018 from the Co-Chairs of the Informal Consultative Process addressed to the President of the General Assembly

Pursuant to General Assembly resolution 72/73, we were appointed as the Co-Chairs of the nineteenth meeting of the United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea.

We have the honour to submit to you the attached report on the work of the Informal Consultative Process at its nineteenth meeting, which was held at United Nations Headquarters from 18 to 22 June 2018. The outcome of the meeting consists of our summary of issues and ideas raised during the meeting, in particular with regard to the topic of focus "Anthropogenic underwater noise".

In line with past practice, we kindly request that the present letter and the report be circulated as a document of the General Assembly under item 78 (a) of the preliminary list.

(*Signed*) Pennelope Althea **Beckles**
Kornelios **Korneliou**
Co-Chairs

* A/73/50.

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Nineteenth meeting of the United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea

(18 to 22 June 2018)

Co-Chairs' summary of discussions[1]

1. The United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea held its nineteenth meeting from 18 to 22 June 2018. Pursuant to General Assembly resolution 71/257, as recalled in resolution 72/73, the meeting focused its discussions on the topic "Anthropogenic underwater noise".

2. The meeting was attended by representatives of 47 States, 11 intergovernmental organizations and other bodies and entities, and eight non-governmental organizations.[2]

3. The following supporting documentation was available to the meeting: (a) report of the Secretary-General on oceans and the law of the sea, which relates to the topic of focus of the nineteenth meeting of the Informal Consultative Process (A/73/68); and (b) format and annotated provisional agenda of the meeting (A/AC.259/L.19). The full texts of the contributions to the report of the Secretary-General relating to the topic of focus along with the compilation of peer-reviewed scientific studies on the impacts of ocean noise on marine living resources, submitted pursuant to paragraph 107 of General Assembly resolution 61/222, were made available on the website of the Division for Ocean Affairs and the Law of the Sea.

Agenda items 1 and 2
Opening of the meeting and adoption of the agenda

4. The Co-Chairs, Pennelope Althea Beckles Permanent Representative of Trinidad and Tobago to the United Nations, and Kornelios Korneliou, Permanent Representative of Cyprus to the United Nations, appointed by Miroslav Lajčák, President of the seventy-second session of the General Assembly, opened the meeting.

5. Opening remarks were made by the Under-Secretary-General for Legal Affairs and United Nations Legal Counsel, Miguel de Serpa Soares and the Assistant Secretary-General for Economic Development and Chief Economist, Department of Economic and Social Affairs, Elliot Harris, on behalf of the Secretary-General.

6. The meeting adopted the format and annotated provisional agenda and approved the organization of work.

Agenda item 3
General exchange of views

7. A general exchange of views took place at the plenary meetings on 18 and 21 June. Delegations highlighted the importance of the Informal Consultative Process, paying particular attention in their statements to the topic of focus, "Anthropogenic underwater noise" (paras. 10–34 below). The discussions on the topic of focus within the panel segments are reflected in paragraphs 35 to 100 below.

[1] The summary is intended for reference purposes only and not as a record of the discussions.

[2] A list of participants is available on the website of the Division for Ocean Affairs and the Law of the Sea at http://www.un.org/Depts/los/index.htm.

8. Delegations recognized the primary role of the Informal Consultative Process in integrating knowledge, exchanging opinions and coordinating among multiple stakeholders and competent agencies, as well as enhancing awareness of various topics related to oceans, including emerging issues. Many delegations expressed continued support for the role of the Informal Consultative Process in promoting coordination among competent agencies and enhancing awareness of topics relating to oceans, including emerging issues, while promoting the three main pillars of sustainable development: social, economic and environmental. In that regard, several delegations expressed support for the renewal of the mandate of the Informal Consultative Process. Several delegations underscored the need to continue to strengthen and improve its effectiveness as a unique forum for comprehensive discussions on issues related to oceans and the law of the sea.

9. Appreciation was expressed to those who had contributed to the voluntary trust fund for the purpose of assisting developing countries, in particular least developed countries, small island developing States and landlocked developing States, in attending meetings of the Informal Consultative Process. Several delegations urged States to continue to contribute to the voluntary trust fund to foster the widest possible participation and make the process most meaningful and inclusive, as well as promote capacity-building. The Director of the Division for Ocean Affairs and the Law of the Sea provided an update on the status of the Voluntary Trust Fund and underlined its very limited available funds. She reiterated that the General Assembly, in its resolution 72/73, had expressed its continued serious concern regarding the lack of resources available in the trust fund and had urged that additional contributions be made.

Topic of focus

10. In his remarks delivered on behalf of the President of the seventy-second session of the General Assembly, the Vice-President of the session, Omar Hilale (Morocco), noted the environmental and socioeconomic impacts of anthropogenic underwater noise. He underscored the need to invest more in order to better understand the issue and to bridge knowledge gaps, especially through capacity-building. Emphasizing the need for more integrated action and for further advocacy and outreach, the Vice-President noted that, in the light of the commitments that had been made by the United Nations to the health of the oceans, including resolutions on bottom fishing and the adoption of the 2030 Agenda for Sustainable Development, including Sustainable Development Goal 14, the United Nations was the forum in which to build momentum in relation to anthropogenic underwater noise.

11. Many delegations expressed appreciation for the report of the Secretary-General on oceans and the law of the sea (A/73/68), which was considered to be comprehensive and to provide a solid basis for discussions.

12. Many delegations also welcomed the topic of focus as timely. They expressed concern over potential social, economic and environmental impacts of anthropogenic underwater noise, as the growth of ocean-related human activities had resulted in increased sound in many parts of the ocean. Some delegations observed that anthropogenic underwater noise could be intentional as well as unintentional and could be produced from a variety of sources, such as shipping, seismic surveys and the use of airguns, explosions, industrial activities, sonar, military testing, drilling and dredging. A view was expressed that not all sound introduced into the ocean environment by humans was harmful or would have deleterious effects on marine life. Moreover, sound also resulted from critical human activities such as navigation, scientific research, energy exploration and maritime security.

13. The impacts of anthropogenic ocean noise on specific marine species and ecosystems were highlighted by several delegations, including impacts on marine mammals, fish in general and migratory species. Several delegations noted that higher levels of anthropogenic underwater noise were affecting the abilities of marine species to rely on sound for critical life functions. The negative impacts of anthropogenic noise upon marine life referred to by delegations included inducing changes in the behaviour and migratory routes of species, disrupting communication, displacing animals from feeding and breeding grounds and causing stress, injury and death. A delegation recalled that in his report, the Secretary-General had indicated that negative impacts had been identified for at least 55 marine species. A number of delegations highlighted particular species within their maritime zones, including endangered species, that were at risk of harm from anthropogenic underwater noise.

14. The importance of addressing the socioeconomic impacts of anthropogenic underwater noise was underscored by many delegations, including impacts on tourism, fishing, transportation, the provision of goods and services, livelihoods and food security. Some delegations also recognized the importance of the topic for artisanal fishing and coastal communities, indigenous peoples and their cultural heritage.

15. The continuing gaps in knowledge and lack of data with respect to anthropogenic underwater noise and the urgent need for further research in this area were emphasized by many delegations. Some delegations highlighted the need for further research into the sources of the noise and its impact on marine biodiversity in general. Several delegations stressed the importance of understanding how anthropogenic underwater noise affected fish, as decreases in stocks could further undermine the sustainability of fisheries. Many delegations also underlined the importance of studying the cumulative impacts on ocean ecosystems of the noise and other stressors, such as climate change, and the interplay of such stressors with the noise and related socioeconomic impacts.

16. Several delegations emphasized the importance of introducing, during the conduct of research, a multi-species approach within priority areas to quantify the spatial distribution and behavioural changes of species. In addition, those delegations also suggested that comprehensive baseline studies and long-term monitoring to track future changes in anthropogenic underwater noise would be of great value and that acoustic data be included in global ocean observing systems. They also proposed the establishment of in situ acoustic listening stations. The importance of long-term observations in different parts of the ocean was stressed, as well as the need for enhanced cooperation and coordination and capacity-building. A delegation suggested that the identification of areas for further research on the topic of focus be achieved as an outcome of the meeting.

17. Several delegations provided examples of research being undertaken at the regional and national levels. In addition, several delegations highlighted a regional initiative to study noise from shipping using real-time noise sensors to monitor sound levels on a continuous basis. A number of delegations indicated that studies had been conducted in their countries to provide a better understanding anthropogenic underwater noise and its effects on the marine environment, including on marine mammals and fish movements, to inform policy decisions. The importance of the science-policy interface was stressed. Reference was made to the role of the Regular Process for Global Reporting and Assessment of the State of the Marine Environment, including Socioeconomic Aspects and the information provided in the First Global Integrated Marine Assessment on the effects of the noise on marine biota. It was noted that the second world ocean assessment, to be completed in 2020, would build on the baseline set out in the first assessment and evaluate trends.

18. Many delegations highlighted the need for effective implementation of the United Nations Convention on the Law of the Sea, which sets out the legal framework within which all activities in the oceans and seas must be carried out. A delegation noted that any measures developed in the future to address anthropogenic underwater noise would need to be in accordance with the duties, rights and freedoms provided for in the Convention.

19. Many delegations recalled the obligation under the Convention to protect and preserve the marine environment while respecting the rights and freedoms enshrined therein. Other obligations in Part XII of the Convention were also referred to, including article 197. Many delegations expressed the view that anthropogenic underwater noise was a form of marine pollution and recalled the relevant provisions of the Convention, including articles 1 and 194. Several delegations noted that the European marine strategy framework directive included noise under its definition of pollution.

20. Furthermore, many delegations pointed out that anthropogenic underwater noise, as a form of pollution, was covered by Sustainable Development Goal 14, target 14.1 of the 2030 Agenda. Several delegations also underscored the importance more generally of addressing the effects of the noise for the implementation of the 2030 Agenda, in particular Sustainable Development Goal 14.

21. Several delegations highlighted various management approaches that could be used to address anthropogenic underwater noise, including greater use of area-based management tools and environmental impact assessments. The importance of an ecosystem approach was also underlined. Several delegations proposed creating a detailed map of the distribution of economically and ecologically important marine species, especially endangered species, as well as the establishment of marine protected areas for habitats and for migratory routes of marine species sensitive to this noise. Quiet zones along migratory corridors were also proposed by several observer delegations. Some delegations noted that the cumulative impacts of noise-generating activities should be taken into account in the conduct of environmental impact assessments.

22. A number of delegations emphasized the importance of the precautionary approach in the light of the data and knowledge gaps. A delegation highlighted the need for a participatory approach. Some delegations also considered that the "polluter pays" principle was applicable.

23. A view was expressed that it was necessary to incentivize approaches to mitigate anthropogenic underwater noise. A delegation noted that economic incentives could contribute to mitigation action by encouraging noise mitigation technology and the introduction of "quiet ships". An observer delegation noted that, in the shipping industry, improvements in addressing energy efficiency and biofouling could have beneficial spillover effects for anthropogenic underwater noise.

24. Delegations also emphasized the need to raise awareness of anthropogenic underwater noise through action in intergovernmental processes. Several delegations referred to the General Assembly resolutions on oceans and the law of the sea and on sustainable fisheries that already addressed the issue. It was suggested by an observer delegation that the General Assembly could characterize the noise as a serious form of transboundary pollution to be mitigated and addressed in its resolutions. Another observer delegation proposed that the General Assembly encourage States to make use of the Guidelines on Environmental Impact Assessments for Marine Noise-generating Activities of the Convention on the Conservation of Migratory Species of Wild Animals. Several observer delegations proposed that anthropogenic underwater noise should be recognized as transboundary pollution to be addressed under

Sustainable Development Goal 14. A delegation suggested the development of guidelines to regulate economic activities that create the noise.

25. Many delegations recognized the important work undertaken by competent international organizations on anthropogenic underwater noise. In that context, reference was made to the Guidelines for the Reduction of Underwater Noise from Commercial Shipping to Address Adverse Impacts on Marine Life of the International Maritime Organization (IMO); the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter and its Protocol; the initial IMO strategy on reduction of greenhouse gas emissions from ships; the guidelines for the control and management of ships' biofouling to minimize the transfer of invasive aquatic species; the Code on Noise Levels on Board Ships under the International Convention for the Safety of Life at Sea; and other IMO measures, including routing measures and particularly sensitive sea areas. Reference was also made to the guidelines on environmental impact assessments for marine noise-generating activities of the Convention on the Conservation of Migratory Species of Wild Animals, as well as the role of the Conference of the Parties to the Convention on Biological Diversity and the role of the International Whaling Commission, including in convening expert workshops on the effects of anthropogenic underwater noise and in sharing information regarding the impacts of the noise on marine biodiversity.

26. Several delegations indicated that they had adopted a regional directive that required the development of marine strategies to achieve "good environmental status" by 2020, ensuring that the introduction of energy, including underwater noise, was at levels that did not adversely affect the marine environment. They had also established a working group on the implementation of the directive.

27. A number of delegations highlighted national actions to address anthropogenic underwater noise. Some delegations indicated that they had developed regulations and guidelines to minimize the risk of acoustic harm associated with seismic surveys. A delegation indicated that it had adopted legislation related to the minimization of harm caused by the noise, and another highlighted how its environmental code of practice set out the guidelines for minimizing the risk of injury and disturbance to marine mammals from seismic surveys, permitting seismic activities only when visual mitigation using observers was possible and requiring the use of the lowest practicable power levels. A delegation stated that it had adopted an ocean noise strategy which would guide its Government's work for the next decade. Another delegation stated that its ocean protection plan contained both mandatory and voluntary measures, including the provision of financial incentives as indicated in paragraph 24 above. Some delegations stated that they had established monitoring systems for anthropogenic underwater noise.

28. Some delegations highlighted their participation in global, regional and sectoral bodies which had addressed the topic of anthropogenic underwater noise.

29. Some delegations suggested that the effects of anthropogenic underwater noise could be addressed at the Intergovernmental Conference on an International Legally Binding Instrument under the United Nations Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas Beyond National Jurisdiction, in order to consider the recommendations of the preparatory committee established by the General Assembly pursuant to resolution 69/292 on the elements and to elaborate the text of such an international legally binding instrument. An observer delegation suggested addressing noise in the context of area-based management tools, including marine protected areas and providing for the possibility of establishing "quiet zones". The observer delegation also proposed devising a robust and transparent environmental impact assessment process that

would also apply to activities that generate the noise and would address cumulative impacts.

30. Delegations underlined the need for concerted international action to assess and mitigate the effects of anthropogenic underwater noise in all ocean areas, owing to the interconnected nature of the ocean and the transboundary nature of the impacts of the noise. Several delegations also highlighted the importance of international cooperation to enhance research and the collection of data, in particular in data-deficient regions.

31. The need to develop cross-sectoral coordination was also underscored. Delegations also underlined a need for increased cooperation and collaboration between States, intergovernmental organizations and civil society to improve responses to anthropogenic underwater noise. Furthermore, the need for effective cooperation and coordination at the global level was emphasized and the role of the General Assembly in supporting such cooperation and coordination was highlighted in that regard. A delegation also indicated a possible role for UN-Oceans.

32. It was also suggested that there was a need for different types of cooperation to allow for the most robust and comprehensive partnerships, allowing for enhanced sharing of best practices and the best available technologies. The development of toolboxes, as noted by the Secretary-General in his report (A/73/68, para. 66), was considered useful while giving due consideration to divergence across regions. All relevant global and regional organizations, Member States and civil society were encouraged to share their knowledge and exchange experiences.

33. The urgent need for capacity-building and transfer of knowledge and marine technology to address knowledge gaps and uncertainties and alleviate the negative impacts of anthropogenic underwater noise and the importance of cooperation to that effect was underlined by several delegations. Several delegations specifically emphasized the need for capacity-building activities and initiatives to assist developing States in sustainably managing marine resources, developing management strategies, building national programmes to monitor and study the possible effects of anthropogenic underwater noise and making well-informed policy decisions. Several delegations pointed out that, in order to achieve that, financial assistance and transfer of technology should be carried out under the principle of common but differentiated responsibilities. The importance of ensuring the transfer of knowledge to small island developing States, least developed countries and landlocked developing States was also highlighted.

Area of focus: anthropogenic underwater noise

34. In accordance with the format and annotated provisional agenda, the discussion panel on the topic of focus was organized in two segments structured around: (a) sources and environmental and socioeconomic aspects of anthropogenic underwater noise; and (b) cooperation and coordination in addressing anthropogenic underwater noise. The panellists gave presentations on the segments, after which interactive discussions were held.

1. Sources and environmental and socioeconomic aspects of anthropogenic underwater noise

Panel presentations

35. In the first segment, the following gave presentations: Christopher Clark, Director and Imogene Johnson, Senior Scientist — Bioacoustics Research Program, Cornell University, provided a scientific overview of sound, its sources and how it is

propagated underwater, highlighting the major sources of anthropogenic underwater noise; Richard Hale, Director, EGS Survey Group, and member of the International Cable Protection Committee, addressed underwater sounds from submarine cable and pipeline operations, noting that sound emission was limited to pre-installation surveying and installation; Lee Kindberg, Head of Environment, Health, Safety and Sustainability, Maersk Line in North America, provided information on shipping as a source of anthropogenic underwater noise, highlighting mitigation options, such as vessel retrofits; Jill Lewandowski, Chief, Division of Environmental Assessment, Bureau of Ocean Energy Management, United States Department of the Interior, gave a presentation on the different sources of sound in offshore energy development, with a focus on oil, gas and wind; Larry Mayer, Director, School of Marine Science and Ocean Engineering and the Center for Coastal and Ocean Mapping, University of New Hampshire, provided an overview of anthropogenic underwater noise associated with sonar imaging and ocean mapping; Rudy Kloser, Commonwealth Scientific and Industrial Research Organisation, Australia, presented a general overview of the potential impacts of anthropogenic underwater noise on a range of species, from zooplankton to whales; Lindy Weilgart, OceanCare and the Department of Biology, Dalhousie University, discussed the impacts of anthropogenic underwater noise on invertebrates, fish, cetaceans and ecosystems in general; Jonathan Vallarta, Senior Underwater Acoustics Consultant, JASCO Applied Sciences, shared the results of a 2017 study conducted at Paradise Reef, Cozumel, Mexico, which recorded more than one month of continuous underwater acoustic data; Adrián Madirolas, Head, Hydroacoustic Research Office, National Institute of Fisheries Research and Development, Argentina, described how fish perceive sound and are impacted by anthropogenic underwater noise; Peter Tyack, University of St Andrews, addressed the challenges of predicting interactions of noise impacts with other stressors on marine species and ecosystems; Joseph Appiott, Associate Programme Officer, Secretariat of the Convention on Biological Diversity, presented the ongoing work by the Convention on the impacts of anthropogenic underwater noise, as well as the socioeconomic implications of those impacts; Nicolas Entrup, Ocean Policy Expert, OceanCare, presented on the socioeconomic and cumulative impacts of noise and the need to develop guidance for decision makers on the associated risks; and Andrew Carroll, Assistant Director of Marine and Antarctic Geoscience, Geoscience Australia, addressed the role of science in domestic policy-making on anthropogenic underwater noise and, drawing on case studies, described Australia's mitigation strategies relating to marine seismic surveys and provided an overview of Geoscience Australia's research on the impacts of anthropogenic underwater noise on marine fauna.

Panel discussions

36. The discussions held after the presentations addressed various sources of anthropogenic underwater noise and their impacts on marine life, as well as research needs and potential measures to address the noise.

37. In response to a question, Ms. Kindberg stressed the need for caution in making the assumption that ships that were more energy-efficient were necessarily more silent, noting that, to date, the observation referred to only one class of vessel. She highlighted that the most economical speed varied by type of vessel and propulsion system and that certain ships could be noisier at low speeds. She noted the need for further studies regarding optimal speeds for both energy efficiency and sound reduction.

38. A delegation enquired about the correlation between recommendations issued by the International Council for the Exploration of the Sea and progress towards ships that were more silent. Ms. Kindberg noted that naval architects took into account the

relevant regulations and recommendations but that no information was available on the extent to which those were implemented.

39. In relation to anthropogenic underwater noise from ships, Ms. Kindberg addressed two questions on the economies achieved by retrofitting vessels to enhance energy efficiency. She highlighted reductions of 43 per cent since 2007 in energy consumption and carbon dioxide emissions per container per kilometre, but noted that the payback period depended on fluctuations in fuel costs.

40. In response to a question on the frequency at which cables had to be replaced, Mr. Hale clarified that telecommunications cables would usually be replaced every 20 to 25 years, while power cables lasted over 50 years. Pipelines had more variable life spans and would be chosen according to the expected time of depletion of offshore oil and gas reservoirs.

41. Addressing a question related to noise emissions from offshore energy, Ms. Lewandowski highlighted studies showing low levels of operational noise from offshore wind farms. A delegation noted that the frequency range of seismic airguns used in offshore energy surveying reached beyond 5 kHz, up to 100–150 kHz, and that dolphins showed disturbance many kilometres away.

42. With regard to ocean mapping, a question was asked about the cost and availability of seafloor mapping technology for developing countries. Mr. Mayer indicated that the cost of equipment ranged from tens of thousands of dollars for smaller sonars to between $1 million and $2 million for larger ones, in addition to installation and operating costs, which would amount to a total of several million dollars. He noted that the United Nations Environment Programme Global Research Information Database in Arendal, Norway, had assisted developing countries in collecting data to prepare submissions to the Commission on the Limits of the Continental Shelf. Several delegations stressed that the high cost associated with multibeam sonar mapping was prohibitive for many States.

43. A delegation underscored the importance of taking into account geophonic and biophonic background noise, which was location-specific, in addition to anthropogenic noise. Mr. Tyack observed that, although scientists had measured ocean sounds across many environments, it was challenging to identify the source of some sounds which are recorded in the ocean. It would be important to research chronic anthropogenic underwater noise. Mr. Vallarta remarked that little was known about the biophony or geophony of coral reefs and that this would need to be further studied.

44. Addressing a question on whether existing capabilities allowed for the mapping of sensitive areas based on marine mammal locations and overlapping that information with noise sources, Mr. Mayer drew attention to ongoing research aimed at mapping ambient noise levels, tracking vocalizing marine organisms and capturing ship noise. He noted that while the technology existed, government support would be needed to follow up on the research results.

45. Mr. Clark noted the need for high-resolution sensing networks. He indicated that there were acoustically undersampled spaces in the ocean and that while large libraries of sounds existed, these were not sufficiently analysed. Mr. Mayer suggested using submarine cable networks to assist in getting the spatial coverage needed, noting, however, that the legal aspects of using cables for dual purposes would need to be addressed.

46. In response to a question concerning research on and trends in noise levels from shipping in the Atlantic, Mr. Clark clarified that while the ability to assess trends existed, there might not be consistency between measurements and model predictions depending on sampling resolutions. He noted that, on the basis of current research, the chances of causing direct physical injury to an animal by anthropogenic

underwater noise were slim, as continuous exposure to levels of sounds which caused harm was rare. The chronic, long-term influence of the noise on marine life was, however, a cause for concern.

47. With regard to the impact of noise on marine mammals, a delegation stated that the long range of cetacean communication remained a theoretical concept. In response, Ms. Weilgart stressed that there were many levels to communication and that it was crucial for cetaceans to be able to hear and correctly interpret mating songs. Mr. Tyack observed that masking models needed to account for the ability of animals to compensate for variations in ambient noise by, for example, calling at a higher frequency. In response to a question regarding the sensitivity of whales to seismic airguns in the light of the lack of audiogram data, Mr. Carroll stated that a significant knowledge gap remained, but noted that passive acoustic monitoring could detect changes in movement of sperm whales. A delegation also noted that the reactions of humpback whales to marine seismic surveys within a three-kilometre range of seismic surveys had been observed. Mr. Clark referenced scientific papers indicating that whale ears were mechanically tuned towards low frequencies.

48. A delegation highlighted a mass stranding of melon-headed whales in Madagascar which, according to an independent scientific review panel, was most likely a behavioural response to an ocean mapping programme using sonar systems. Ms. Lewandowski emphasized the need to understand the context and circumstances of such events. She noted that while the sound source itself may not be harmful to the whales, it was important to ensure that no animals were entrapped between the sound source and the shoreline. Mr. Mayer underscored the need for more independent research and peer reviews.

49. In response to a question, Ms. Lewandowski indicated that some research existed with respect to fish mortality in the proximity of airguns and explosions. Several delegations highlighted the importance of better understanding the impacts of noise on fish stocks, in particular on commercially important stocks, and the potential consequences for food security. A delegation encouraged regional fisheries management organizations and arrangements to engage on the issue. The role of the Food and Agriculture Organization of the United Nations in conducting research in the context of sustainable fisheries was also recognized and it was suggested that anthropogenic underwater noise be raised at the Food and Agriculture Organization of the United Nations Committee on Fisheries.

50. A delegation referred to the 2017 study highlighted by Mr. Kloser, Ms. Weilgart and Mr. Entrup in their presentations, which indicated that airgun operations had a negative impact on zooplankton. Mr. Kloser noted that there had been no previously documented long-range impact of seismic surveys on zooplankton, potentially highlighting the difficulties of conducting studies on the open ocean. He also observed that a recent modelling study did not demonstrate an alarming impact on the biome, but noted that measures to mitigate impacts of seismic surveys would be beneficial. Ms. Weilgart stressed that seismic surveys were conducted all over the globe and that there were limits to the ability of plankton to recover. She thus called for proceeding in a precautionary manner.

51. In response to a question on the availability of research on the potential impacts of anthropogenic underwater noise on other species, Ms. Weilgart pointed to studies on cephalods that showed extensive damage from low-frequency sound. However, she noted a gap in literature with respect to turtles, sharks and rays.

52. With regard to cumulative impacts, Ms. Weilgart and Mr. Kloser highlighted the need to consider the interaction of anthropogenic underwater noise with other stressors, but noted the challenge of predicting such impacts. In responding to an inquiry as to how a reduction in noise could foster climate resilience, Mr. Tyack

observed that the focus should be on the stressors that could be most easily addressed to maintain healthy ecosystems. Ms. Weilgart concurred that noise was a stressor that could be immediately addressed and underscored the connection between certain noise sources, in particular shipping and seismic surveys, and climate change. She highlighted that measures that reduced the carbon footprint and emissions could also reduce underwater noise.

53. Mr. Tyack drew attention to a linkage between ocean acidification and underwater sound propagation, whereby acidification could increase the range of effect of underwater noise. However, there was uncertainty as to how acidification would impact the deep layer of the ocean, where most deep sound energy was concentrated. In response to a query concerning the potential breadth of application of the "dose-response" functions model, which was highlighted as a potentially useful tool to predict impacts, Mr. Tyack emphasized the broad range of responsiveness to stressors within a population. He also noted the importance of understanding the dose-response relationship for each stressor and how those stressors interacted.

54. Delegations recognized the need for further research to bridge knowledge gaps in respect of the sources and environmental and socioeconomic impacts of anthropogenic underwater noise. Noting that most research carried out to date had focused on the impacts of noise on higher trophic levels, several delegations enquired about research on lower trophic levels, including commercially important fish species and invertebrates. Ms. Lewandowski drew attention to recent research on the effects of sound mostly from pile-driving, vessels and airguns on invertebrates, fish and fisheries. She noted that the impacts on fish, fisheries and invertebrates had to be assessed as part of environmental impact assessments in the United States. Mr. Entrup noted that it was important to study the socioeconomic impacts of anthropogenic underwater noise on a global scale.

55. Noting that most of the activities related to offshore energy development occurred over the continental shelf, where the most important fishery grounds were located, several delegations asked about specific measures or best practices to mitigate impacts on fisheries from offshore energy development and multibeam sonar mapping. Ms. Lewandowski noted that while mitigation measures had been developed to reduce impacts on marine mammals, they also benefitted fish in the area. She stressed the lack of knowledge with respect to hearing ranges and the effects of sound on most species of fish and underlined the need for further research, including on the effects of newly developed quieting technologies. Ms. Lewandowski also noted that industry was cooperating with commercial fishers in the survey areas in trying to resolve their concerns.

56. A delegation emphasized that, while it was important to mitigate impacts on the marine environment, all sources of sound should be assessed separately, citing the example of seismic surveys in earthquake-prone areas as a critical activity. Ms. Weilgart indicated that even in the case of such critical activities, their impacts could be mitigated through, for example, the use of vibroseis.

57. In response to a question about the methodology of a study on the behavioural impact of anthropogenic underwater noise on scallops, Mr. Carroll pointed out that the study demonstrated the importance of selecting a wide range of metrics and that a combination of both manipulative experiments and behavioural observations was needed for future studies. In response to a question concerning the details of studies conducted on the impact of seismic monitoring on sperm whales, Mr. Carroll explained how data were transmitted in real time and acoustic propagation modelling was used to estimate the potential range of impact on whales.

58. The role of Governments and the measures they could take to address anthropogenic underwater noise was also discussed. Ms. Weilgart, Mr. Kloser and

Mr. Vallarta observed that simple measures that could assist in reducing the impact of noise on marine ecosystems were now technologically available. They emphasized that scientists could continue their efforts to bridge knowledge gaps, but that their ongoing research should not delay action to address noise.

59. A delegation cautioned that it could be difficult to detect and study all the effects of sound on species, especially long-term effects on long-living species. It therefore pointed out that the current evidence of approximately 130 species of marine animals impacted by anthropogenic underwater noise should suffice to put mitigation regulations in place without further delay.

60. In this regard, several delegations underscored the relevance of the precautionary approach, as reflected in principle 15 of the Rio Declaration on Environment and Development and article 6 and annex II to the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks. Several delegations also recalled that the International Tribunal for the Law of the Sea in its advisory opinions had considered this approach part of customary international law. Those delegations concurred with the view expressed by some panellists that there was already sufficient information available for States to act.

61. A delegation noted that the presentations offered promising examples of sound source mitigation to anthropogenic underwater noise. Ms. Lewandowski noted that it was difficult to have laws requiring the use of technologies that were still not commercially available. She indicated that other possible options included prohibiting certain activities in areas known to host vulnerable species until adequate noise reduction and mitigation technologies had been developed. Mr. Madirolas proposed regulating the timing and location of seismic surveys to avoid conducting such surveys during sensitive seasons for migratory species of fish. Ms. Weilgart concurred, but noted that finding the right window for every species would be challenging. She also proposed implementing ship speed restrictions and rerouting ships to avoid travel over the continental shelf or along the continental slope where sound could reflect and propagate more strongly and thus harm marine life. Ms. Kindberg also suggested that Governments could support research, assist stakeholders in utilizing relevant regulations and disseminate best practices.

62. Mr. Vallarta highlighted the need to review national legislation regulating environmental impacts, including anthropogenic underwater noise. Mr. Tyack noted the need for policymakers to drive the collection of data necessary to understand and regulate cumulative impacts.

63. Mr. Mayer added that no regulation yet existed on mitigation of anthropogenic underwater noise related to multibeam sonar and that more studies were needed for evidence-based decisions. He pointed out that nonetheless, certain mitigation measures were already being implemented, such as having marine mammal observers on board or commencing surveys at a lower power level and using ramp-up procedures, thus allowing animals to retreat.

64. Referring to the issue of standardization, a delegation highlighted the need for effective cooperation among States to address the issue of anthropogenic underwater noise. Ms. Kindberg stressed that Governments should encourage standardization, highlighting that various sectors had different ways of measuring, analysing and describing sound. Ms. Lewandowski noted that while the need for standardization had repeatedly been brought up at international conferences on ocean noise and that some progress had been made, the topic had not been prioritized owing to other research needs, including on the effects on species and limited resources. She emphasized that more needed to be done, in particular with the International Organization for

Standardization (ISO). In this context, attention was drawn to the recently published ISO standard on underwater acoustics terminology (ISO 18405:2017). In response to observations by Mr. Carroll and Mr. Appiott that there was a need to develop common standards, metrics and terminology in respect of underwater noise, a delegation asked about progress in that area at the regional or global level. Mr. Carroll observed that Australia had developed standard monitoring techniques across several sampling platforms and was compiling national repositories of bathymetric data. He suggested that applying standard monitoring techniques to passive acoustics and measurements of sound could allow for comparisons of impacts and sound levels. Mr. Entrup encouraged States to make use of guidelines to promote unified approaches to data and to allow for a better understanding of the sources and impacts of anthropogenic underwater noise.

65. Several delegations also highlighted the relevance of tools such as environmental impact assessments and marine spatial planning in addressing underwater noise. It was noted that a better understanding of an area, including its ecological importance, should assist planners and policymakers in planning activities.

66. Several delegations stressed the importance of balancing human activities in the oceans with the need to protect the marine environment from the impacts of underwater noise. Mr. Tyack proposed that a decision-making process should be established to reprioritize human activities in the oceans so as to minimize stress on the marine environment.

67. Participants also discussed the importance of communicating and disseminating information on sources and impacts of noise. Mr. Vallarta underlined the need for scientists to effectively communicate the results of their work, share information and educate relevant stakeholders. Ms. Weilgart also emphasized that, until the impacts of anthropogenic underwater noise were appreciated by noise-producing industries, the necessary technological changes to reduce those impacts would not occur.

68. A view was expressed that coastal communities needed to be engaged at the grass-roots level on the topic, in addition to engaging government decision makers. In that respect, a query was raised on how scientific studies could be meaningful for coastal communities and what specific actions such communities might take to reduce noise impacts from their activities. Ms. Weilgart referred to the link between ocean acidification and anthropogenic underwater noise, and noted that a reduction in run-off and effluent from coastal communities would make reefs more resilient to the effects of ocean acidification. It was also observed that while small boats contributed to underwater noise, certain boat motors had less of an impact than others and that managing overfishing would create more resilience in reefs. Mr. Vallarta suggested that navigation routes could be established to avoid reefs.

69. On the question of stakeholder involvement, Mr. Vallarta shared his experience in working with international counterparts, Mexican authorities and local communities in Cozumel, Mexico, in relation to his study at Paradise Reef. Mr. Kloser also emphasized the importance of stakeholder engagement for the effective implementation of management plans.

70. Mr. Entrup suggested comparing the best available technologies and best practices across countries, as well as providing incentives to promote the development, production and use of quieting technologies. Drawing upon noise reduction regulations in Germany, where the application of "best available technology" formed part of the review and assessment prior to providing a licence for pile-driving, Mr. Entrup suggested that such regulation could boost the development of noise reduction technologies and provide economic incentives for their use. Ms. Weilgart also emphasized the importance of economic incentives for stakeholder engagement, noting that such incentives would spur innovation.

71. It was suggested that the issue of anthropogenic underwater noise be mainstreamed into capacity-building on ocean issues. In response to a question, Mr. Appiott noted that a partnership coordinated by the Convention on Biological Diversity secretariat focused on supporting capacity-building for integrated management approaches to marine biodiversity, which in some cases related to issues of anthropogenic underwater noise.

2. Cooperation and coordination in addressing anthropogenic underwater noise

Panel presentations

72. In the second segment, the following gave presentations: Heidrun Frisch-Nwakanma, Coordinator, Memorandum of Understanding on the Conservation and Management of Marine Turtles and Their Habitats of the Indian Ocean and South-East Asia, Aquatic Species Team, secretariat of the Convention on the Conservation of Migratory Species of Wild Animals, gave an overview of the Convention guidelines, which provide guidance on environmental impact assessments to facilitate informed national decision-making on anthropogenic underwater noise; Stefan Micallef, Assistant Secretary-General, and Fredrik Haag, Head, Office for the London Convention/Protocol and Ocean Affairs at IMO, gave an overview of relevant IMO instruments, including the non-mandatory IMO underwater noise guidelines that provide advice on anthropogenic underwater noise to ship designers, shipbuilders and ship operators; Rebecca Lent, Executive Secretary, International Whaling Commission, gave an overview of its work on the noise, including recommendations aimed at reducing the impacts at the individual level and at the level of entire populations level through improved monitoring, data collection and research; René Dekeling, Co-Chair Technical Group on Underwater Noise, European Commission, addressed the cooperation of the European Union in addressing anthropogenic underwater noise; Nathan Merchant, Co-Convenor, Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention) intersessional correspondence group on noise, highlighted the progress made under the OSPAR Convention framework in coordinating the monitoring, assessment, and management of underwater noise in the North-East Atlantic; Loúreene Jones, Manager, Ecosystems Management Division, National Environment and Planning Agency, Jamaica, introduced the management efforts of her agency relating to anthropogenic underwater noise and highlighted the need to address knowledge gaps and the need for capacity-building; Mariana Melcón, Group leader, bioacoustics research line, Fundación Cethus, presented the progress made by the organization in using bioacoustics to study anthropogenic underwater noise and its effects on marine mammals; Carrie Brown, Director, Environmental Programmes, Vancouver Fraser Port Authority, Canada, gave an overview of the enhancing cetacean habitat and observation programme, which aimed at better understanding and management regarding the impact of shipping activities on at-risk whales; Zo Lalaina Razafiarison, Programme General Coordinator, Ocean State Secretariat, Madagascar, described the challenges for tackling anthropogenic underwater noise in Madagascar and possible measures to address such challenges; René Dekeling, representing the Ministry of Infrastructure and Water Management, Department for Marine and International Water Policy, The Netherlands, highlighted the need for international cooperation to manage the noise from the perspective of a small State; Véronique Nolet, Programme Manager, Green Marine, gave a presentation on a voluntary, multi-stakeholder reporting and certification initiative to address anthropogenic underwater noise from shipping activities; Howard Rosenbaum, Senior Conservation Scientist and Director, Ocean Giants Program, Wildlife Conservation Society, discussed the need for effective coordination and cooperation for mitigating anthropogenic underwater noise impacts, noting the need for a multidisciplinary collaborative effort to address the issue; Frank Thomsen, Senior Scientist and Sales Executive, DHI, representing the

Central Dredging Association, addressed the role of industry in managing the impacts of the noise on marine life; Mark Tasker, Vice-Chair of the Advisory Committee of International Council for the Exploration of the Sea, provided an overview of the role and capacity of the Council related to the noise.

Panel discussions

73. Some delegations observed that large knowledge gaps remained regarding sound levels, the spatial distribution of various sound sources and the possible effects of those sounds on various marine species. They also observed that more research and cooperation to develop standards for sound levels and noise reduction were needed.

74. Delegations welcomed the work of IMO in mitigating the impact of anthropogenic underwater noise from shipping activities. A delegation stressed the need to fill knowledge gaps and to evaluate the effectiveness of the IMO underwater noise guidelines prior to taking further action. In that regard, Mr. Micallef noted that no comprehensive assessments on noise had been conducted to date. Setting any target for further steps at present would be premature therefore owing to large knowledge gaps. Furthermore, the wide variety of ship types, sizes, speeds and operational characteristics added to the complexity of the issue. A delegation stressed the need to advance technical knowledge and design opportunities for quieter vessels, and also stressed the desirability of strengthening cooperation with classification societies in order to identify standards for different ship classes.

75. A delegation sought views on the possible use of the Energy Efficiency Design Index as a vehicle for developing standards to reduce anthropogenic underwater noise, given the relationship between that noise and the energy efficiency of ships. In response, Mr. Micallef observed that the impact of the Index was to be assessed by the IMO Marine Environment Protection Committee soon. He referred to other relevant work of the IMO, including its biofouling guidelines and the initial IMO strategy on reducing greenhouse gas emissions from ships, which would require a shift from hydrocarbon engines to hydrogen fuel and hybrid engines. He noted that those efforts might entail collateral benefits for addressing anthropogenic underwater noise from ships.

76. Following a question regarding how IMO accommodated conflicting interests when establishing a particularly sensitive sea area, Mr. Haag highlighted the steps required to establish such an area and noted that the proponent of a particularly sensitive sea area would consult with neighbouring countries and interested stakeholders. Mr. Haag also noted that IMO had assisted States in developing proposals for establishing a particularly sensitive sea area and that it had cooperated closely with several United Nations agencies, including UN-Oceans and other international bodies.

77. A delegation, noting the IMO underwater noise guidelines and the need for international coordination to address anthropogenic underwater noise at the global level, sought clarification as to whether guidelines for other sources of the noise, such as seismic surveys, could be developed and by which authority. Ms. Frisch-Nwakanma noted that the Scientific Council of the Convention on the Conservation of Migratory Species of Wild Animals was considering whether mitigation guidelines should be developed for specific noise-generating activities and that proposals for areas of focus would be submitted to the thirteenth Conference of the Parties to the Convention on the Conservation of Migratory Species of Wild Animals in 2020. She also noted that such guidelines would be developed in a consultative manner.

78. A delegation noted the work of the International Offshore Petroleum Environmental Regulators and its marine sound working group which had focused on

airguns. The delegation also noted the group's plans to extend its work to pile-driving noise from offshore wind farms in order to identify best practices.

79. Some delegations sought views regarding ways to further enhance international cooperation and coordination in addressing anthropogenic underwater noise. Ms. Lent noted that coordination and communication were critical for avoiding duplication of efforts. Reciprocal attendance at each other's meetings and exchange of documents were helpful in this regard. Mr. Micallef noted that technical cooperation programmes, including seminars and workshops, would benefit from the participation of different agencies. In response to a question on how to strengthen cooperation between international organizations and regional fisheries management organizations, Ms. Lent noted that International Whaling Commission had been consulting with those organizations as part of its by-catch initiative and that such consultations could potentially extend to anthropogenic underwater noise.

80. A delegation highlighted its experience and challenges in the development of noise metrics for southern resident killer whales, and advocated greater coordination and information sharing. It enquired what the biggest challenge was in developing metrics for monitoring anthropogenic underwater noise. Mr. Dekeling noted that undertaking noise monitoring was challenging because of its potential cost. Also, the level of detail required for achieving better assessments was still unclear. In addition, he noted that developing metrics for monitoring continuous noise would be another major challenge owing to the existing knowledge gaps on its impacts. In this regard, he stressed the need for support from the biologist community.

81. Addressing a question concerning the breadth of soundscape modelling in the North Sea, Mr. Dekeling indicated that the measurements and modelling would distinguish between different sources of sound and whether those were anthropogenic or natural.

82. In response to a question as to why stress had not been mentioned as a possible effect of anthropogenic underwater noise, Mr. Dekeling noted that the knowledge on different forms of stress was limited. He highlighted the need to increase knowledge on the effects of continuous noise, including masking.

83. In response to questions concerning the development of a candidate indicator under the OSPAR Convention framework, Mr. Merchant noted that the candidate indicator, which was aimed at quantifying the risk of impact from impulsive noise on key species, was being developed on the basis of a risk- and evidence-based approach and might be adopted as early as April 2019 or April 2020. In response to a related question on the timeline for the Technical Group on Underwater Noise to develop similar indicators and the possibility for Group to develop other types of management recommendations, Mr. Dekeling explained that the Group was tasked with developing a common methodology for assessing data obtained in underwater noise monitoring programmes, rather than developing management recommendations. It had been developing such a methodology aiming to adopt recommendations on threshold values by the end of 2018 or in 2019.

84. Some delegations asked for more information on the impulsive noise registry of the OSPAR Convention which was used to aggregate and harmonize data on impulsive noise sources collected by the parties to the Convention. Mr. Merchant noted that this registry did not hold simultaneous data on the distribution of species due to capacity constraints, but data from ecosystem surveys might be introduced in the future so that relevant information could be used in a more integrated manner.

85. In response to a question on whether guidelines on mitigation techniques for noise from shipping activities, which might be developed under the OSPAR Convention framework, would be compatible with relevant IMO guidelines, Mr. Merchant noted

that such guidelines would be advisory in nature, and that IMO would be consulted to avoid any conflict. He also noted that there was no timeline yet for the development of such guidelines.

86. In response to a query on how to avoid redundant seismic surveys in a given site, it was noted that the issue fell under the responsibility of coastal States and that it was unlikely that a State would issue multiple licenses or permits for seismic surveys for the same area.

87. A delegation drew attention to efforts to establish whale sanctuaries in the South Atlantic and observed that more research and cooperation were crucial in that regard. Another delegation stressed the importance of regional cooperation in addressing anthropogenic underwater noise, in particular in the Caribbean and inquired as to what regional cooperation existed in the region and what platforms could be built upon. Noting the lack of a regional mechanism, Ms. Jones noted that the Caribbean Community could be used as a platform for initiating relevant discussions and exchanging information. However, expertise and guidance from international organizations outside of the region, such as the OSPAR Convention commission and the European Union, would be needed. Mr. Merchant affirmed the willingness of his organization to contribute to efforts facilitating regional cooperation.

88. A question was asked on how to implement the outcomes of the cooperation at the European Union level through regional seas conventions, taking into account differences in membership. Mr. Dekeling noted that in practice, States parties to regional seas conventions but not members of the European Union had cooperated closely with the European Union.

89. Some delegations expressed appreciation for the efforts of the Vancouver Fraser Port Authority in addressing anthropogenic underwater noise. It was suggested that an index of ship noise might be created given the use of hydrophones under that programme.

90. Some delegations enquired how to encourage other ports to take actions similar to the enhancing cetacean habitat and observation programme. Ms. Brown noted the strong interest from multiple stakeholders and drew attention to an effort to create a central repository of information on noise reduction incentives for use by the shipping industry. She also noted that the financial resources for incentives were factored into the budget of the Vancouver Fraser Port Authority.

91. In response to questions regarding the voluntary vessel slowdown trial under the programme, Ms. Brown shared insights on the potential impacts of such measures on vessels and ports. She noted that participating vessels needed to make up for the additional transit time in other areas to maintain schedules, and that some vessels had not participated due to scheduling or safety concerns. She stressed the voluntary nature of the programme to maintain competitiveness. She also noted that it might take a long time for such measures to attract newer and quieter vessels, but if other ports were to offer similar incentives, that might be enough to offset the cost for the retrofit or construction of quieter vessels.

92. Regarding what actions had been taken to engage and introduce the general public to the programme, Ms. Brown noted that there had been active community engagement and a wide range of publicity activities to promote public understanding of the programme.

93. In response to a question on whether there had been any change in distribution and behaviour of the at-risk whales before and after the implementation of the programme, Ms. Brown noted that it was difficult to observe and measure how the animals had responded.

94. In relation to modelling in the context of environmental impact assessments and risk-based approaches to noise management, Mr. Thomsen clarified that significant effects at the population level could be very small if only a small proportion of the population were affected. Referring to the conclusion contained in a 2005 report of the International Council for the Exploration of the Sea indicating that there was little evidence of effects from sonar on beaked whale populations, a delegation noted that no population-level studies had been done in 2005 and that a recently completed 15-year study had shown evidence of population impact. Mr. Tasker acknowledged that scientific knowledge had increased since 2005. Addressing a Council finding that fish could respond to the physical presence of a ship as well as the sounds emitted by it, a delegation stressed that fish responses were still scientifically uncertain. Mr. Tasker noted that the role of the Council was to achieve consensus on the best scientific advice and that levels of uncertainty were often also reflected in its advice.

95. A delegation enquired whether there would be value in creating a new working group in the Council focusing specifically on anthropogenic underwater noise. Mr. Tasker explained that the establishment of such a group would need to be agreed upon by the members of the Council. Mr. Rosenbaum drew attention to a voluntary commitment made at the United Nations Conference to Support the Implementation of Sustainable Development Goal 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development (Ocean Conference) specifically regarding anthropogenic underwater noise (No. 18553).

96. A delegation stressed the importance of sharing best practices and experiences from various regions and sectors. Noting that the strength of the Council was its holistic perspective since it provided scientific advice for both fisheries and environmental management, the delegation announced that it would make a proposal to the Sixth Committee of the General Assembly for the Council to be granted observer status in the Assembly.

97. With reference to the use of marine protected areas, several delegations concurred that establishing such areas in accordance with international commitments, including target 11 of the Aichi Biodiversity Targets, was important. Those delegations noted, however, that a 2014 study had concluded that protected areas established thus far missed 85 per cent of threatened species. Mr. Rosenbaum stressed the importance of marine protected areas for local communities and the benefits that could accrue from ensuring that marine protected areas were quieter. where particular threats had been identified.

98. Several delegations recalled that the duty to conduct environmental impact assessments was enshrined in the United Nations Convention on the Law of the Sea and had also been recognized as a requirement under customary international law by the International Court of Justice. Those delegations also noted that a good environmental impact assessment, followed by implementing measures, would provide a strong basis for the management of any potential impacts.

99. Ms. Nolet clarified, in response to a question, that the third-party individuals undertaking verifications for Green Marine were independent professional verifiers and followed an annual training programme.

Agenda item 4
Inter-agency cooperation and coordination

100. The Under-Secretary-General for Legal Affairs and United Nations Legal Counsel made a statement, in his capacity as Focal Point of UN-Oceans, providing

information on the activities of UN-Oceans since the eighteenth meeting of the Informal Consultative Process, including in relation to the topic of focus.

101. He recalled the significant contribution of UN-Oceans to the Ocean Conference and highlighted the voluntary commitment of UN-Oceans registered at the Conference to raise awareness of ocean-related regulatory and policy frameworks and member activities in support of their implementation. He informed the meeting of two new members of UN-Oceans: the secretariats of the United Nations Framework Convention on Climate Change and of the Convention on International Trade in Endangered Species of Wild Fauna and Flora.

102. The Focal Point called attention to the 2018 UN-Oceans work programme, reflecting, inter alia, new activities relating to the United Nations Decade of Ocean Science for Sustainable Development (2021–2030) and follow-up to the Ocean Conference. Among ongoing activities, he highlighted the progress made in the development of a methodology for indicator 14.c.1 of Sustainable Development Goal 14, which refers to the number of countries making progress in ratifying, accepting and implementing through legal, policy and institutional frameworks, ocean-related instruments that implement international law, as reflected in the United Nation Convention on the Law of the Sea, for the conservation and sustainable use of the oceans and their resources.

103. With regard to the decision of the General Assembly to defer the review of the terms of reference of UN-Oceans until its seventy-third session, the Focal Point recalled that, with regard to the informal consultations on the Assembly resolution on oceans and the law of the sea held during the seventy-second session, some delegations had expressed the view that they would welcome a paper prepared by UN-Oceans to assist them in the review. Such a document was made available to delegations for information at the meeting.

104. With regard to the information provided on the proposed methodology for target 14.c.1, delegates expressed the view that, while efforts on the development of the methodology by UN-Oceans were supported in general, it was necessary for States to report directly to the Statistical Commission of the United Nations on their implementation of Sustainable Development Goal 14. It was suggested that the proposed questions be simplified and indicative lists of instruments shortened so as, inter alia, not to disincentivize States from responding to the questionnaire. In response, the Director of the Division for Ocean Affairs and the Law of the Sea clarified that the proposed methodology, as resented during a UN-Oceans side event held in the margins of the twenty-eighth Meeting of States Parties to the Convention, consisted of a questionnaire containing brief questions relating to binding and non-binding global and regional instruments relevant for the implementation of Goal 14 and its targets, and identified indicative lists of instruments for which UN-Oceans members acted as secretariat. She noted that some delegations had provided comments and suggestions at that side event which would be reflected in a revised proposal. The next UN-Oceans side event, to be held during the informal consultations on the draft General Assembly resolution on oceans and the law of the sea at the seventy-third session, would offer an opportunity to provide feedback on the revised methodology and to invite volunteers for its pilot testing.

Agenda item 5
Process for the selection of topics and panellists so as to facilitate the work of the General Assembly

105. Referring to paragraph 348 of General Assembly resolution 72/73, the Co-Chairs invited views and proposals on ways to devise a transparent, objective and

inclusive process for the selection of topics and panellists so as to facilitate the work of the Assembly during informal consultations concerning the annual resolution on oceans and the law of the sea.

106. No statements were made under the item.

Agenda item 6
Issues that could benefit from attention in the future work of the General Assembly on oceans and the law of the sea

107. The Co-Chairs drew attention to a composite streamlined list of issues that could benefit from the attention of the General Assembly and invited comments from representatives.

108. The Co-Chairs also invited representatives to submit additional topics that could benefit from the attention of the General Assembly.

109. The Co-Chairs also referred to paragraph 335 of General Assembly resolution 71/257 on the further review of the effectiveness and utility of the Informal Consultative Process by the Assembly at its seventy-third session and invited delegations to consider addressing the matter under agenda item 6.

110. No statements were made under the item.